DOCUMENT RESUME

ED 474 685 RC 024 005

AUTHOR Howley, Craig

TITLE The Lifeworld Makes Mathematics Education Rural: Implications for Math Education Research.

SPONS AGENCY National Science Foundation, Arlington, VA.

PUB DATE 2003-04-00

NOTE 12p.; Paper presented at the Annual Meeting of the National Council of Teachers of Mathematics (San Antonio, TX, April 2003).

CONTRACT NSF-0119679

PUB TYPE Opinion Papers (120) -- Speeches/Meeting Papers (150)

EDRS PRICE EDRS Price MF01/PC01 Plus Postage.

DESCRIPTORS Anti Intellectualism; *Educational Research; Elementary Secondary Education; *Mathematics Education; *Relevance (Education); Research Needs; *Rural Education; *World Views

IDENTIFIERS *Rural Culture; Social Constructivism

ABSTRACT

The great challenge for rural education scholars is explaining what relevance the rural circumstance might have to schooling, a task especially difficult in the case of mathematics education. This paper argues that the rural lifeworld makes math education rural and suggests implications for research based on that statement. The lifeworld is the fully realized, socially constructed world of everyday life--the realm in which we fashion such meaning for our lives as we are able. That schooling has almost nothing to do with the lifeworld is an intellectual and cultural disaster. Of course, schooling constitutes its own lifeworld, one in which most students dislike math instruction and recognize that the benefits of math are not intended for them. The lifeworld everywhere is being degraded by television and mass marketing; this global tendency makes the backwaters of the world interesting places that harbor possibilities for intellectual development not easily found elsewhere. Entertaining such possibilities requires discarding many beliefs, including claims about the nature of "best practice." Educational research into the separation of lifeworld and schooling requires deep engagement with specific lifeworlds; the rural lifeworld is particularly appealing, having such qualities as land ethic, attachment to place, community, familism, conservatism, and intradependence. Five practical points for math education researchers are: discard deficit models of rural culture, read up on rural issues and dilemmas and social constructivism, do survey research and post-hoc analyses with large data sets, and accommodate the sharp variability of rural places in research designs. (SV)

Reproductions supplied by EDRS are the best that can be made from the original document.

ED 474 685

The Lifeworld Makes Mathematics Education Rural: Implications for Math Education Research

Craig Howley
Ohio University
ACCLAIM Research Initiative

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Craig Howley

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

Paper presented at the annual meeting of the National Council of Teachers of Mathematics, San Antonio, TX, April 2003

This material is based upon the work supported by the National Science Foundation Under Grant No. 0119679. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

BEST COPY AVAILABLE

The Lifeworld Makes Mathematics Education Rural:
Implications for Math Education Research

The great challenge for those of us working as rural education scholars (in and out of universities) is explaining what relevance the rural circumstance might have to schooling. Most professional educators have not been interested in what we have to say about the harm done by deficit models of rural culture, about the role of *place* in intellectual life and in society, and about how the institution of schooling has functioned to undermine rural communities, not to mention undermining the life of the mind.

The task of explanation, I think, is especially difficult in the case of math education. Mathematics shares with philosophy, poetry, and music amazing qualities of transcendence and beautiful abstraction. And yet, the connections of philosophy, poetry, and music with the rural world are not difficult to explain; examples are numerous and even rather familiar. So *what gives* in the case of mathematics and mathematics education? Answering that question makes for good research.

The message today is the title of this short talk: *The lifeworld makes mathematics education rural*. The implications for practice are, I believe, unknown, but the implications for research are momentous and they are becoming clearer thanks to the concern of colleagues like those on this panel. We have the support of NSF and that is an *enormous* help.

The Two Degradations

An intriguing sentence about the place of art (art, that is, in the sense of poetry and music) in a world of mass production and furious consumption caught my attention last week. I've changed only a few words. The changes damage the original meaning

hardly at all., since, of course, one of the key virtues of mathematics is its beauty [here's the somewhat altered sentence]:

> Mathematics education is tolerated in isolation from the structures of economic and bureaucratic power, [exactly] as new social movements are [tolerated] today, and simultaneously subverted by the systemic imperatives of market and administrative forces, [exactly] as the lifeworld is [subverted] today [by those same forces]. (Schecter, 2000, p. 6)

Confused? I'll give you a close interpretation that fits my purposes today:

> K-12 mathematics education functions primarily to qualify students for college entrance. This role for mathematics education resembles the place assigned to academic mathematics in the political economy: a value-free and neutral tool accessible to the highest bidder. Now, this degradation of mathematics, perhaps not so oddly, resembles the degradation of the lifeworld, which the institutions of society have contracted to a sphere of private pleasure and consumption.

These two degradations are not coincidental, in fact. They result from the same ideology, the one in which the public good depends on the private good and not the other way round. A bit of confession might be in order at this juncture: my most important published work to this point is an extended interpretation of the ways in which American schooling subverts the development of intellect among Americans, and why. The analysis is not trendy, and I'm not a fanatic follower of Paolo Freire, Sandra Harding, Antonio Gramsci, Michel Foucault, or Jürgen Habermas. I've done too much reading is

why, and so I understand that people like Jacques Barzun, Hannah Arendt, and Daniel Bell – often characterized as conservatives – have a lot to say that those others overlook. My educational project, if I have one, has to do with disabling fanaticism. Research seems like a decent place to do that work.

The Lifeworld

OK, so what *is* the lifeworld? It's more than everyday life and lived experience per se, it's the fully realized, socially constructed *world* of everyday life – that realm in which we talk, laugh, eat, love, survive and succumb to crises, and in fact, fashion such meaning for our lives as we are able. I promise you – we do *not* fashion that meaning in school. In school, we are more likely to encounter *mis*-education and meaninglessness. Lots of people have made this observation. Nonetheless, for those of us not content with the *mis*-education sponsored in the name of schooling, the "as-we-are-able" bit refers to a prospective role for schooling in the making of meaning. Schooling might, of course, help people make meaning a lot more frequently than is now the case, and especially among the masses of students who languish today in rotten schools.

Many of you self-identify as constructivists, and so you should appreciate this observation, for if meaning-making is important, then the connection to the lifeworld is not just nice, it's essential. The problem is that the connection is only logical; in practice in mathematics education especially, you can hardly find it. The fact that schooling has almost nothing to do with the lifeworld is an intellectual and cultural disaster. This isn't just my view, either. Jerome Bruner says so too (Bruner, 1996).

The Lifeworld of Schooling

Of course, schooling constitutes a lifeworld, too. It is so large portion of the lifeworld of kids, in fact, that they routinely confound it with things in the wider lifeworld. Students, for instance, think that the mathematics instruction they experience somehow is the same thing as mathematics. And most of them will tell you that they do not like mathematics, when what they mean is that they don't like math instruction.

Many of those who teach mathematics methods courses, or who research math education, are painfully aware of the complex distinctions between mathematics and *school* mathematics, but this is probably not the case even with most high school math teachers. Among students, the major substantive learning about mathematics *per se* (that is, aside from the fact that you supposedly need it to get into college, a major untruth by the way) is that mathematics itself is a decontextualized business.

Students probably do know that companies pay big bucks for math knowledge, but most students correctly understand that such a benefit is not intended for them. Telling poor kids that they can be airline pilots and scientists is not just unhelpful, it is probably harmful; it reinforces what they already know – poor kids really do know that their odds of being in the top 5% of American earners, are actually worse than 1 in 20 (because, of course, their odds, as poor kids, are less than the odds for the average American; and please note that such knowledge is quite mathematically subtle).

This slough of despond, then, is the lifeworld of schooling when it comes to mathematics education. One needs to go further: it's a lifeworld intended to subvert the other, real-world lifeworld. For the philosophers of the lifeworld this is old news –

they've been writing about the inequitable distribution of knowledge for almost a century, and they understand full well that schooling is an instrument of this inequity.

The philosophers also understand that education – via inequitable schooling – has become a commodity. They understand, still further, who benefits most. Both mathematics education and the lifeworld are subverted by the *extremely* vested interests of the status quo. Keeping these worlds apart undermines both as realms of freedom. If you want to point to something in schooling that really works, this is one of the big ones. Anti-intellectualism: it *really works*.

Lifeworld Making Mathematics Education Rural

The lifeworld everywhere is being degraded by television and mass marketing, controlled by a global regime of transnational corporatism. It is no accident that cultural homogenization and convergence is taking place world wide.

The point for us is that this global tendency makes the backwaters of the world interesting places. Why? They are certainly under attack, but their marginality is an asset according to some observers (e.g., Esteva & Prakash, 1996; Williams, 1973, 1989). The divergence of the rural lifeworld from the mainstream renders it more educationally powerful and certainly more interesting. That is, if you can agree that television and mass marketing are bad education or *mis*-education, then you might hazard the view that a rural lifeworld would harbor possibilities for intellectual development difficult to find elsewhere.

Of course, to entertain such possibilities, one needs to give up some bad professional habits. One needs to stop agreeing that well-endowed suburban schools exemplify all that is good in schooling; one needs to stop believing that the most

successful student is the one who becomes the adult with the best job; and most of all one needs to stop believing very many claims about the nature of "best practice."

Fortunately, cease-and-desist orders to oneself are the beginning of research. ***Re***-search, get it: the dangerous tendency to take a second look, a third look, a fourth look – a regression of as many looks as it takes to make the meaning that is to be made.

The Meaning to be Made

Educational research is *applied* research, not basic research. We investigate the world in order to understand it as a possible contribution to making it better. This means that we start with a practical problem, issue, or dilemma.

The problem, issue, or dilemma according to this short talk is the separation of lifeworld and schooling. To study this separation, of course, one needs to engage deeply with particular lifeworlds, and the rural lifeworld is particularly appealing, first, because some of us love it and see the dangers that increasingly threaten rural places and rural people. The need to undertake this work seems urgent to us as rural people. But rural lifeworlds are also important as a paradigm of divergence from the cosmopolitan or metropolitan mainstreams.

So, now, what might qualities might rural lifeworlds share?

The following list is only suggestive, but it owes a debt to several thoughtful colleagues in rural education, notably Paul Nachtigal, Paul Theobald, Alan DeYoung, and Ron Eller:

- land ethic (cycles of life sustained by connection to a particular place on the land – and the idea of *place* is quintessential to understanding the rural lifeworld),

- community (a contradictory and localized sense of public purpose thought appropriate to a particular rural place),
- family (more particularly, *familism,* attachment to extended family, residing in place over time, as the primary social grouping),
- conservatism (risk-avoidance and deep attachment to local ways of being and knowing – misapprehended by the mainstream as simplistic "resistance to change"), and
- *intra*dependence (community self-reliance, in short: the general tendency of small communities to *cohere*).

These qualities are hardly universal across rural America, but they are common in most rural places. They are also complex and contradictory because the rural lifeworld, contrary to the impression given by television and the mass market, is *not* a realm of quaint sentimentality. The rural lifeworld is an arena of contest and struggle, like any other. There is racism, rank injustice, and poverty – but also wonder and beauty and great passion. In this the rural lifeworld is simply *life*.

Implications for Research

It won't do to give an agenda for rural mathematics education research just yet. Our position at ACCLAIM is that, for now, more conversation is needed to unpack critical questions. We have, however, developed a framework to guide the work of the Center, including research. You can go to the Research Initiative website; there's a link to the PDF file of the framework right on our homepage.

Today, in closing, I want simply to share five practical points with math education researchers who haven't yet given much thought to the rural lifeworld.

First, **discard deficit models of rural culture**. This is the first requirement for objectivity. It embodies, actually, the first rule of professional conduct – do no harm.

Second, **read up on rural issues and dilemmas** — these change how you position and adapt math education questions. This contextualization is absolutely essential, in part because asking the same old questions will otherwise embed a deficit mentality in the approach to the rural lifeworld.

Third, **read up on social constructivism** – it's applicable to the relationship between mathematics and the lifeworld, and to the relationship between schooling and the lifeworld; psychological constructivism is a very, very different enterprise, and largely inadequate to the task.

Fourth, **do survey research and post-hoc analyses with large data sets** – there's too much qualitative research out there and policy makers ignore it for obvious reasons. I'm not advising against ethnography. I love it, of course. But the tendency in mathematics education research, relying on cognitive science and the psychological version of constructivism, is an inward turn. What's needed in this work is an outward turn. The lack of math education that pays any attention at all to the rural lifeworld (or to any other lifeworld, for that matter) can be traced to the essential *psychologism* of the field (an observation generally true for all curriculum-and-instruction fields).

Fifth, **accommodate the sharp variability of rural places in research designs** – state context is very important in terms of education policy, for instance, but also for historical, political, and economic differences. Many other sorts of variability pertain, as

well. The danger in fragmenting contexts too radically, however, is the loss of rural focus.

So, the lifeworld does make mathematics education rural, and what I'm pleading for is that math education researcher become the appropriate instruments of that lifeworld. It's good work if you can get it, and all you have to do is talk to Jim and me.

References

Bruner, J. (1996). *The culture of education.* Cambridge, MA: Harvard University Press.

Esteva, G., & Prakash, M. (1998). *Grassroots postmodernism: Remaking the soil of culture*. London: Zed Books.

Schecter, D. [2000]. *Marxism, Republicanism and Critical Hermeneutics: A Reply to Neil Stammers*. Retrieved April 2, 2003, from http://www.sussex.ac.uk/Units/SPT/journal/archive/pdf/issue4-5.pdf

Williams, R. (1973). *The country and the city*. New York: Oxford University Press.

Williams, R. (1989). *The politics of modernism*. London: Verso.

The original Schecter quote follows:

In this case communication is tolerated in isolation from the structures of economic and bureaucratic power, as new social movements are today, and simultaneously subverted by the systemic imperatives of market and administrative forces, as the lifeworld is today. (Schecter, 2000, p. 6)

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

NOTICE

Reproduction Basis

X	This document is covered by a signed "Reproduction Release (Blanket)" form (on file within the ERIC system), encompassing all or classes of documents from its source organization and, therefore, does not require a "Specific Document" Release form.
	This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").